Deliverable B: Client needs

Need statements:

- A simple non-clunky wood door jig with secure bolt stencil.
- Easy to use, self-explanatory.
- Reduces time required for flush bolt cut-out (current time 30 minutes).
- Durable, ideally replaced once a year maximum.
- Adjustable or multiple jigs- door thickness varies from 1 ¾" to 2 ¾" so backset can vary up to half an inch.
- Attach to the door so manufacturer does not need to hold in place.
- Must be exact to the 1/32 inch.
- Fastening system which will not damage the door.
- Not adhesive due to dusty factory environment.
- $100 budget (approx.).
- Flush bolt should be inserted 12" from top/bottom of the door (24" max.)

Data

Questions	User Statement	Interpreted Need
Typical uses		
	The client employs jigs to facilitate the precise guidance of tools(routers)	Jigs are used to guide labourers with their flash bolt cut-out
	The client uses the jig that ensures the doors remain undamaged during its use.	Jig needs to be non-destructive
Current tool (Likes)	The client likes how cheap their jigs are	Cost effective need to be under 100$
	The client is seeking Exact cuts 1/32 inch	Jig needs to be Precise
	The Client is seeking a jig that works in a harsh environment	Jig needs to be durable
	The client is seeking a jig that is simple to assemble and user friendly	Easy to use, self-explanatory
Current tool (dislikes)	Client uses many thicknesses of doors between 1-3/4in to 2-3/4in	Adjustable wood door jig
	Client current flash-bolt cut-out time 30 minutes	Jig needs to be time efficient and reduce the current time
	The client doesn't like that the jig doesn't clamp	Jig needs to clamp or fasten to the door
Suggested Improvements	The client is looking for a simple design	Simple and compact design, non-clunky Jig

Table with assigned priorities

Group	Need	Priority (1-5)
Ease of use	Simple design, non-clunky	4
	Easy to use, self-explanatory.	4
	Attaches to the door; does not need to be held in place.	4
Functionality	Adjustable to fit many door thicknesses and thus back sets	5
	Exact to the 1/32 inch.	4
	Holds up in a dusty environment.	4
	Does not damage the wood door.	5
	Measures to allow flush bolt to be inserted 12” from top/bottom of the door	4
Appeals to the buyer financially	Reduces time required for flush bolt cut-out.	5
	Stays within $100 budget.	3
	Durable	4

5 – critical, top priority
4 – highly desirable
3 – nice, but not necessary
2 – not important
1 - undesirable

Problem statement

A need exists for machinists to precisely drill out the flush bolt cut-out in a door with an adjustable jig that is easy to use, does not damage the door and reduces time in the cut-out process.

Unknown info that needs to be clarified/defined.

- Does the client have any visual design specifications for the jig (i.e., colour preferences, engraved company logo, etc.)?
- Should the jig measure the placement for the screws as well?
- Will the jig be only for the outer part of the flush bolt cut-out (i.e., the 6-¾ -in by 1-in rectangle) or also for the inner cut-out (i.e., the rectangle cut-out that goes all the way though the wood)?
- Are there any previous designs that can be used as a good reference to build our design?
- Does the client have room to lay the door down flat in case we design a jig that needs to be used on a door laying down horizontally instead of on its side as is done in the client’s current process?
- How much time would the client like to reduce in their flush bolt cut-out process?
- Does the client want the jig to work for tall doors too (i.e., the ones that have the flush bolt 24" from top instead of 12")?
- Do workers wear gloves when they are working? If so, what kind? (can gloves impede a workers' ability to operate the jig, or have an impact on our design?)